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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,637	04/05/2006	Kenji Kousaka	SSC-06-1067	4126
35811 7590 03/13/2009 IP GROUP OF DLA PIPER US LLP ONE LIBERTY PLACE 1650 MARKET ST, SUITE 4900 PHILADELPHIA, PA 19103			EXAMINER ZHU, WEIPING	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 03/13/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,637	Applicant(s) KOUSAKA ET AL.	
	Examiner WEIPING ZHU	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 6, 7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 6, 7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 7, 2009 has been entered.

Status of Claims

2. Claims 4, 6, 7 and 10 are currently under examination wherein all claims have been amended in applicant's amendment filed on December 2nd, 2008. Claims 5, 8, 9, 11 and 12 have been cancelled in the same amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "wherein the step of reducing the step" in lines 2 and 3 of claim 6 renders claim 6 because it would not be clear to one of ordinary skill in the art what technical features to which it refers.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6, 7 and 10 are rejected under 35 U.S.C. 102(b) as being unpatentable over Jurmann (US 5,167,735) in views of JP 57-035620.

With respect to claims 4, 6, 7 and 10, Jurmann ('735) discloses a method of controlling generation of a boron oxide (i.e. white powder) in a bright annealing furnace comprising a step of reducing and maintaining a oxygen or water content (i.e. partial pressure of steam as claimed) within the furnace to less than 1×10^{-5} to suppress formation of boron oxide compounds from boron contained within steel strips in the furnace (col. 1, line 38 to col. 3, line 20 and claim 1). Jurmann ('735) further discloses the oxygen content in the annealing furnace is monitored and regulated during heating to maintain the oxygen content of less than 1×10^{-5} in the furnace (col. 2, lines 46-53)

Jurmann ('735) does not disclose that the step is conducted by introducing a gas having a hydrocarbon component as claimed in the instant claim 4; a chemical compound having a carbon component as claimed in the instant claim 6; and a gas having a carbon component as claimed in the instant claims 7 and 10. JP ('620) discloses a method for controlling furnace gas for bright annealing comprising introducing a hydrocarbon gas (i.e. a gas having both hydrogen and carbon components) inside the heating region of the furnace to prevent oxidation of the steel strip (abstract). JP ('620) further suggests that a carbon can be introduced inside the

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heating region of the furnace for the same purpose, which reads on the claimed feature of instant claim 6. A dew point within the heat region of the furnace of JP ('620) would obviously be lowered as claimed because the hydrocarbon gas or the carbon component introduced inside the heat region of the furnace of JP ('620) is identical to those claimed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to introduce a hydrocarbon gas or a carbon component inside the heat region of the furnace of Jurmann ('735) as disclosed by JP ('620) in order to improve the brightness of the steel strip and to prevent oxidation and decarburization of the steel strips as disclosed by JP ('620) (abstract).

Response to Arguments

5. The applicant's arguments filed on December 2nd, 2008 have been fully considered but they are not persuasive.

First, the applicant argues that Jurmann ('735) does not teach controlling the oxygen content by introducing hydrocarbon or a carbon component as claimed. In response, the examiner notes that the ground(s) of rejection of the claimed features rely on the teaching of JP ('620) rather than that of Jurmann ('735).

Second, the applicant argues that JP ('620) pertains to a batch-type bright annealing furnace while Jurmann ('735) relates to a continuous bright annealing furnace; the furnaces are different. In response, the examiner notes that the rejection was based on the prior art's broad disclosure rather than preferred embodiments. See MPEP 2123. Furthermore, JP ('620) does not limit the application of the disclosed method of introducing a hydrocarbon gas or a carbon component into a furnace to lower

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the partial pressure of the oxygen in the furnace to a batch-type bright annealing furnace as asserted by the applicant.

Conclusions

6. This Office action is non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

3/6/2009

/George Wyszomierski/
Primary Examiner
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